

Problem 3.17: A Simple Circuit	106
Problem 3.18: Circuit Design	107
Problem 3.19: Equivalent Circuits and Power	107
Problem 3.20: Power Transmission	108
Problem 3.21: Optimal Power Transmission	109
Problem 3.22: Big is Beautiful	110
Problem 3.23: Sharing a Channel	110
Problem 3.24: Circuit Detective Work	111
Problem 3.25: Mystery Circuit	111
Problem 3.26: More Circuit Detective Work	112
Problem 3.27: Linear, Time-Invariant Systems	113
Problem 3.28: Long and Sleepless Nights	114
Problem 3.29: A Testing Circuit	114
Problem 3.30: Black-Box Circuit	115
Problem 3.31: Solving a Mystery Circuit	115
Problem 3.32: Find the Load Impedance	116
Problem 3.33: Analog "Hum" Rejection	116
Problem 3.34: An Interesting Circuit	117
Problem 3.35: A Simple Circuit	117
Problem 3.36: An Interesting and Useful Circuit	118
Problem 3.37: A Circuit Problem	119
Problem 3.38: Analog Computers	119
Problem 3.39: Transfer Functions and Circuits	120
Problem 3.40: Fun in the Lab	120
Problem 3.41: Dependent Sources	120
Problem 3.42: Operational Amplifiers	121
Problem 3.43: Op-Amp Circuit	122
Problem 3.44: Why Op-Amps are Useful	123
Problem 3.45: Operational Amplifiers	124
Problem 3.46: Designing a Bandpass Filter	124
Problem 3.47: Pre-emphasis or De-emphasis?	125
Problem 3.48: Active Filter	126
Problem 3.49: This is a filter?	126
Problem 3.50: Optical Receivers	127
Problem 3.51: Reverse Engineering	128
3.25 Solutions to Exercises in Chapter 3	128
Chapter 4 Frequency Domain	132
4.1 Introduction to the Frequency Domain	132
4.2 Complex Fourier Series	132
Exercise 4.2.1	133
Example 4.1	134
Exercise 4.2.2	137
4.3 Classic Fourier Series	138
Exercise 4.3.1	138
Exercise 4.3.2	140
Exercise 4.3.3	140
Example 4.2	141